

# Work Order ID 74664

Wednesday, October 05, 2011 8:24:04 AM



# U/R

Page 1

Item ID: D350-748-101

Accept



Setup Start



Revision ID: U/R

Stop



Item Name: Crosstube Installation, High Fwd

Start Date: 10/5/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 10/21/2011 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals:

Process Plan: U.C.J.

Date: 11/10/05 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D350-748-141

F U/R OK 11.10.05

0.00

100



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPPD350-748-101 CHG002

**SCRAP**

110



BENDING MACHINE - CROSSTUBES

CNC Bend I

Memo

0.00

CNC Delta 100 Bender

Bend tube as per Dwg D350-748-141 using CNC bender program D350F and Folio FT



11-11-9

120



QC15- Crosstube Dimensional Check

0.00

QC

Memo

0.00

Quality Control

W/O: 74664		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D350-748-101 PAR #: \_\_\_\_\_ Fault Category: X tube NCR: Yes No DQA: Amk Date: 11/11/29  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: OK Date: 11/11/30

NCR: 11-1030		WORK ORDER NON-CONFORMANCE (NCR) 2550						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11.11.10	110	Twist after bending 15 > 0.5  <del>Material properties</del> Root Cause: <u>EQUIPMENT</u>	<u>U</u> 11.11.10	Scrap tube CP 11.11.10	<u>RC</u> 11.11.23	<u>DD</u> 11-11-23	<u>U</u> 11.11.29	<u>W</u> 11.11.28

NOTE: Date & initial all entries

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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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125

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

\*\*\*Stress relief\*\*\*

Heat treat crosstube as per QSI010 4.3

Temp: 375Start time: 4h45Finish time: 8h45

SPD 11-11-09

127

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
	Crosstubes								
Crosstubes	<b>Memo</b>	0.00							
Crosstubes	1-Drill Tube as per Dwg D350-748-141 Using DT8876 A,B &C Drill Jigs, Set-up drill table as per QSI 010								
	2-Deburr								
	3-Engrave Part # and Batch # as per Dwg D350-748-141								
	4-Remove all marks from tube within limits of D350-748-141								
	5- Apply a light coat of LPS3 on the interior of tube Batch: _____								
140	QC5- Inspect part completeness to step on W/O	0.00							
QC	<b>Memo</b>	0.00							
Quality Control	CHECK 10 DEG HOLES WITH DT8876E (EUROCOPTER CLAMP)								

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150

Outsource process-Cadplate per QSI017 4.1.9.1

0.00



Outsource3

Memo

0.00

Outsource process - Cad plate

Issue P/O: \_\_\_\_\_

Stress relief at 375° for 5 hours

Magnetic Particle Inspect per ASTM E1444

Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2

Embrittle relief at 375° for 8 hours, Chromate Treat

Possible Supplier: Southwest United Industries

Ensure Certificate of Conformity is attached

160

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

★ SEE W/D CHG ATTACHED.

POSITIVE RECALL

EFFECTIVE 11.10.11 AUTH CP

RELEASED \_\_\_\_\_ DATE \_\_\_\_\_

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector*

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
11.10.05	161	LOAD TUBE TO 3500 <sup>16</sup> FOR 1 MINUTE.  REF D.S. EMAIL.				CP 11.10.05 DS/042		
11.10.05	162	NDT TUBE.				CP 11.10.05 DS/042		

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## Kim Johnston

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**From:** Chris Provencal <cprovencal@dartaero.com>  
**Sent:** Wednesday, October 05, 2011 10:07 AM  
**To:** Johnston, Kim  
**Subject:** FW: 350 crosstubes

Can you print this.

**From:** David Shepherd [mailto:dshepherd@dartaero.com]  
**Sent:** Tuesday, April 27, 2010 3:40 PM  
**To:** 'Mike Petsche'  
**Cc:** 'Bill Beckett'; 'L Lacelle'; 'Chris Provencal'; 'Dan Stow'; ssheldon@dartaero.com  
**Subject:** 350 crosstubes

Mike,

I discussed the 350 crosstube load testing with Bill a little while ago and this plan makes sense to him.

So, my recommendation to clear these crosstubes is to load the fwd crosstubes to 3500 lb and the aft crosstubes to 3000 lb in the deflection test rig and document on the work orders that this test has been completed. Hold max load for 1 minute. Per TP-D350-748-2, these loads represent the maximum load on these crosstubes at gross weight and are below the yield point of the material. I would like to request that Chris Provencal witness these tests and sign off the work orders based on his experience with Dart landing gears. My feeling is that if there is a problem with the parts, it will manifest itself during this load test. I, for one, would feel a lot more confident in testing each crosstube in this manner than relying totally on what Exova has to say. I think it would be very difficult to reach a conclusion on the whole batch on the basis of cracks in two parts from the batch.

I believe that we can accomplish this before next Friday, which also gives us time to hear what Exova has to say in case it has an impact on our decision. So far, what I have seen from Exova shows me that there are fluctuations in the heat treating but the tubes are heat treated to our specification.

For this reason, I believe we should tell DHS that it looks like we will be able to start shipping 350 crosstubes by May 7th pending a successful Engineering test of the material.

David.

W/O:		WORK ORDER CHANGES					
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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180  SprayPaint	SprayPaint	0.00							
	Memo	0.00							
	1-Prime inside crosstube as per QSI 005 4.2								
	2-Prime Outside of Tube as per Dart QSI 005 4.2								
190  QC	QC14- Inspect Spray Paint	0.00							
	Memo	0.00							
	Then, Wrap in plastic bag to protect from scratches								
200  Crosstubes	Crosstubes	0.00							
	Memo	0.00							
	1-Install Ground wire Insert, then insert screw and washer								
	2-Install Abraison strips as per Dwg D350-748-141 & QSI 035.								
	3-Install supports Using Dt8876 as per Dwg D350-748-141, Torque to 60-80 IN-LBS								

W/O:		WORK ORDER CHANGES					
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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00							
220  Packaging Packaging	Pick Kit  Memo	0.00  0.00							
230  QC Quality Control	QC4- 100% Inspect kits for completeness  Memo	0.00  0.00							

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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240

0.00



Packaging

Packaging

Memo

0.00

Identify and pack for shipping as per PPP D350-748-101

Location: \_\_\_\_\_

PPP Rev: \_\_\_\_\_

250

0.00



QC21- Final Inspection - Work Order Release

QC

Memo

0.00

Quality Control

ME  
11-11-28

W/O:		WORK ORDER CHANGES					
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Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 06-07-05 JLM  
 IPP Rev:B Update qty of MS21042L5 06-09-12 KJ  
 IPP Rev:C Rev B 07-11-15 DD  
 IPP Rev D Combined manufacturing 08.04.02 EC verified by: DD  
 IPP Rev:E 08-06-24 revD as per dwg DD verified by:EC IPP Rev:F  
 10.08.04 added QSI010 4.3 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D350-748-141TRN  Crosstube Turning Detail		Manufactured	No			110	Each	3.0000	1	1			
<div> <div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>LG</div> <div>3</div> <div></div> </div> <div> <div>72812</div> <div>1</div> <div></div> </div> <div> <div>72815</div> <div>1</div> <div></div> </div> <div> <div>72817</div> <div>1</div> <div></div> </div> </div>													
ALS4-1032-225  Insert		Purchased	No			200	Each	1,852.000	1	1			
<div> <div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>ST282</div> <div>1852</div> <div></div> </div> <div> <div>110768</div> <div>62</div> <div></div> </div> <div> <div>118386</div> <div>860</div> <div></div> </div> <div> <div>118966</div> <div>930</div> <div></div> </div> </div>													
AN960JD10  Washer	NAS1149D0363J	Purchased	No			200	Each	0.0000	1	1			

B73576 X1

SAD 11-11-09

W/O:		WORK ORDER CHANGES					
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Start Date: 10/5/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

D2856-400

Manufactured No

200 f

373.3845

1.181

1.243158



Abraison Strip

LocationLoc QtyLoc Code

ST403

0.3149

68076

0.3149

ST409

373.0696

63735

0.6696

71164

156.4

73491

216

200

Each

63.0000

2

2

D3502-1

Manufactured No



Support

LocationLoc QtyLoc Code

ST063

63

61206

7

64004

10

68951

12

72129

14

73419

20

MS21920-20

Purchased No

200

Each

62.0000

2

2



Clamp (per MIL-DTL-8783C)

LocationLoc QtyLoc Code

LG050

62

116799

10

118236

6

118649

46

Wednesday, October 05, 2011 8:24:10 AM

Shop Packet Print

Page 2

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Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

200

Each

215.0000

1

1



Screw

Location

Loc Qty

Loc Code

ST290

15

117441

15

ST291

200

118612

200

AN4-41A

Purchased

No

220

Each

309.0000

8

8



Bolt

Location

Loc Qty

Loc Code

ST360

309

115108

34

115705

50

116191

50

117619

50

117795

25

118451

50

118838

50

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Parent Item Name: Crosstube Installation, High Fwd

Start Date: 10/5/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

AN4-6A Purchased No 220 Each 6,236.000 16 16



Bolt

Location	Loc Qty	Loc Code
ST356	1230	
117872	30	
118422	300	
118628	400	
118838	300	
119127	200	
ST358	6	
117514	6	
ST516	5000	
119017	5000	

AN5-32A Purchased No 220 Each 183.0000 4 4



Bolt

Location	Loc Qty	Loc Code
ST339	75	
118628	50	
118983	25	
ST340	108	
117872	58	
118422	50	

AN960JD416 NAS1149D0463J Purchased No 220 Each 0.0000 32 32



Washer

AN960JD516 NAS1149D0563J Purchased No 220 Each 0.0000 8 8



Washer

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, October 05, 2011 8:24:10 AM

Work Order ID: 74664



Parent Item: D350-748-101



Parent Item Name: Crosstube Installation, High Fwd

Start Date: 10/5/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

D3500-1 Manufactured No

220 Each 28.0000 4 4



Saddle



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST424	21	
66127	9	
68947	12	
ST424/25	7	
62207	7	

D3501-1 Manufactured No

220 Each 245.0000 16 16



Bushing



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST063	202	
68939	102	
70682	100	
ST066	43	
67757	43	

MS21042L4 Purchased No

220 Each 14,709.00 24 24



Nut



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST300	3709	
117441	51	
117601	637	
117885	21	
118451	2000	
118927	1000	
ST516	6000	
119017	6000	
ST518	5000	
119075	5000	

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

Page 6

Wednesday, October 05, 2011 8:24:10 AM

Work Order ID: 74664



Parent Item: D350-748-101



Parent Item Name: Crosstube Installation, High Fwd

Start Date: 10/5/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

MS21042L5

Purchased

No

220

Each

2,684.000

4

4



Nut

Location

Loc Qty

Loc Code

ST300

1184

116105

5

116548

53

117441

248

117611

82

118179

496

118910

300

ST518

1500

119109

1500

Wednesday, October 05, 2011 8:24:10 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

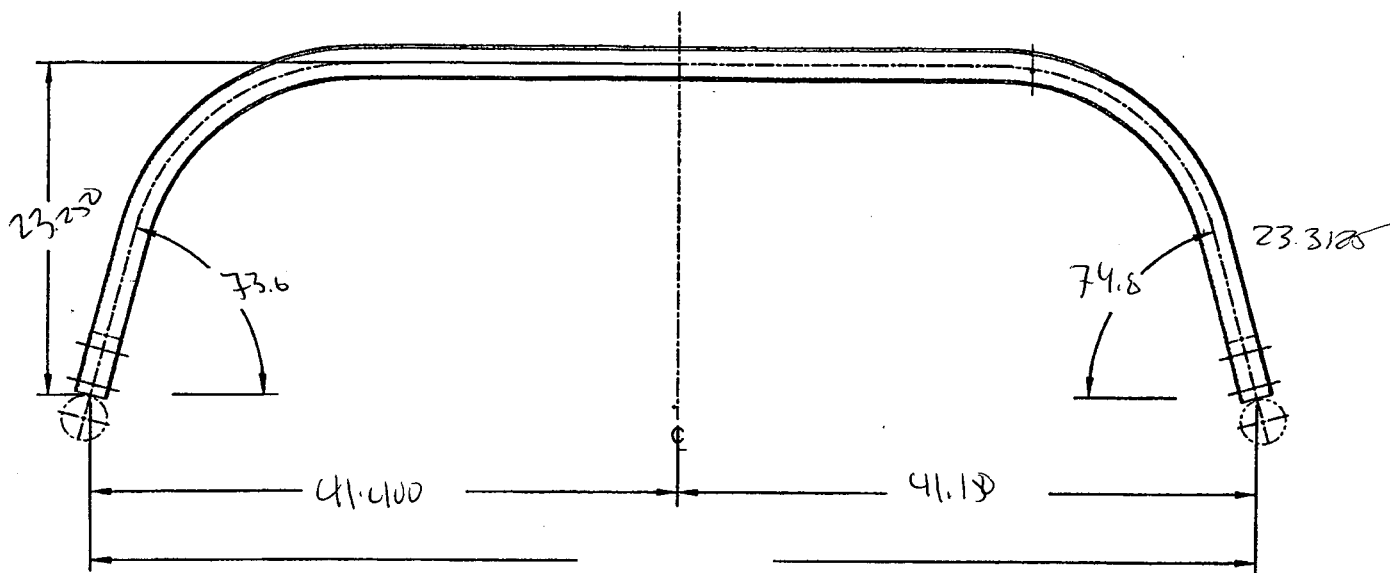
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**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order:	74664
Description: Crosstube High Fwd (AS350/355)		Part Number:	D350-748-101
Inspection Dwg: D350-748-141 Rev: E		Page 1 of 1	

Required Dimension	Min	Max
Height	23.13	23.37
1/2 Span	40.78	41.02
Angle	75	77
Total Span	81.56	82.04



Comments
twist = 0.572

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	

11/08/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



Item	Qty -141	Part Number	Description
1	X	D350-748-141	CROSSTUBE ASSEMBLY (AS 350/355 HI FWD)
2	1	D6015-125	CROSSTUBE (OR D6017-115)
3	2	D3502-1	SUPPORT
4	2	D2856-400-710	ABRASION STRIP
5	1	AELS-1032-225	INSERT
6	1	NAS1149D0363J	WASHER (OR AN960JD10)
7	2	MS21920-20	CLAMP (PER DART SPEC. M-MS21920-20)
8	1	MS27039-1-10	SCREW

SHOP COPY  
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ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

WITHOUT NOTICE  
WORK ORDER

NO. 74664 M.L.J

11/10/05

# GENERAL NOTES:

- MATERIAL: MANUFACTURED FROM D6015-125 OR D6017-115  
FINISHED LENGTH = 110.270±0.06
- FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2  
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: DART PART NUMBER "D350-748-141" AND BATCH NUMBER ON INSIDE OF CUFF  
PER DART QSI 044 6.4 (VIBRATING STYLUS)
- WEIGHT: 30.45 lbs
- PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.
- BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.  
NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING. ACCEPTABLE TO VERIFY TENSILE STRENGTH BY HARDNESS TEST PER ASTM E18 TO 40-45 HRC.
- INSTALL D2856-400-710 ABRASION STRIPS WITH A GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.
- MAX TWIST AFTER BENDING: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.25 (ZN C1-3).

OK P.11.10.05  
UNDER REVIEW  
P.11.10.12

RELEASED  
2011-01-18

F	ADD HRC TEST OPTION (B8-1) PER PAR 09-040, ADD TWIST LIMIT (A8-1, C1-3), ADD D6015-125 OPTION (C8-1), STOCK DIM NOW MACHINED (D1-4)	CP	10.11.23
E	REVISE GENERAL NOTES; UPDATE TO CURRENT ADD STANDARDS; RELOCATED FLAG #6 PER PAR 08-046 (ZN A6-3); TOLERANCES (ZN C6-3, D1-3)	RF	09.09.30
D	MAG. PARTICLE AND CAD PLATE AS MFD.	CP	06.10.31
C	ADD CAD PLATING	CP	06.08.14
B	ADD D6017-115 & PRIME AND PAINT	CP	06.06.30
A	NEW ISSUE	CP	06.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.11.23		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D350-748-141	REV. F SHEET 1 OF 4
TITLE CROSSTUBE (AS 350/355 HI FWD)	SCALE NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

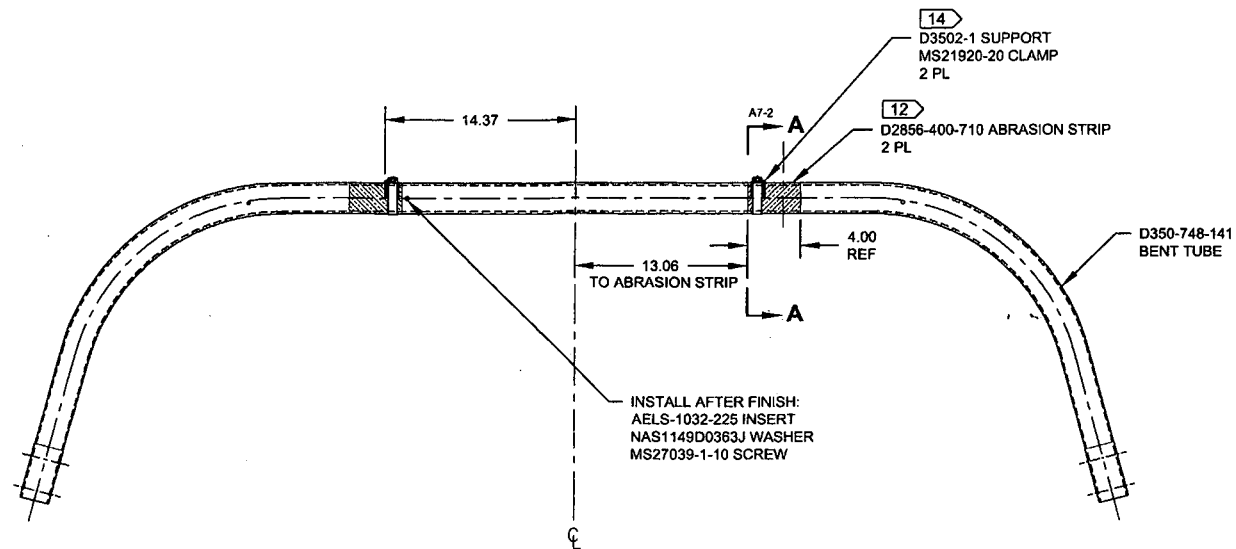
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

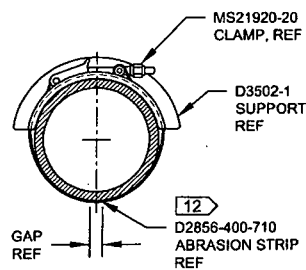
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**NOTE:** Date & initial all entries

74664



**D350-748-141  
ASSEMBLY DETAIL**



**SECTION A-A** D4-2  
SCALE 4X

UNDER REVIEW  
11.07.11

**RELEASED**  
2011-01-38

DESIGN	92	<b>DART AEROSPACE LTD</b>	
DRAWN	92	HAWKESBURY, ONTARIO, CANADA	
CHECKED	92	DRAWING NO.	REV. F
MFG. APPR.	92	D350-748-141	SHEET 2 OF 4
APPROVED	92	TITLE	SCALE
DE APPR.	92	CROSSTUBE (AS 350/355 HI FWD)	NTS
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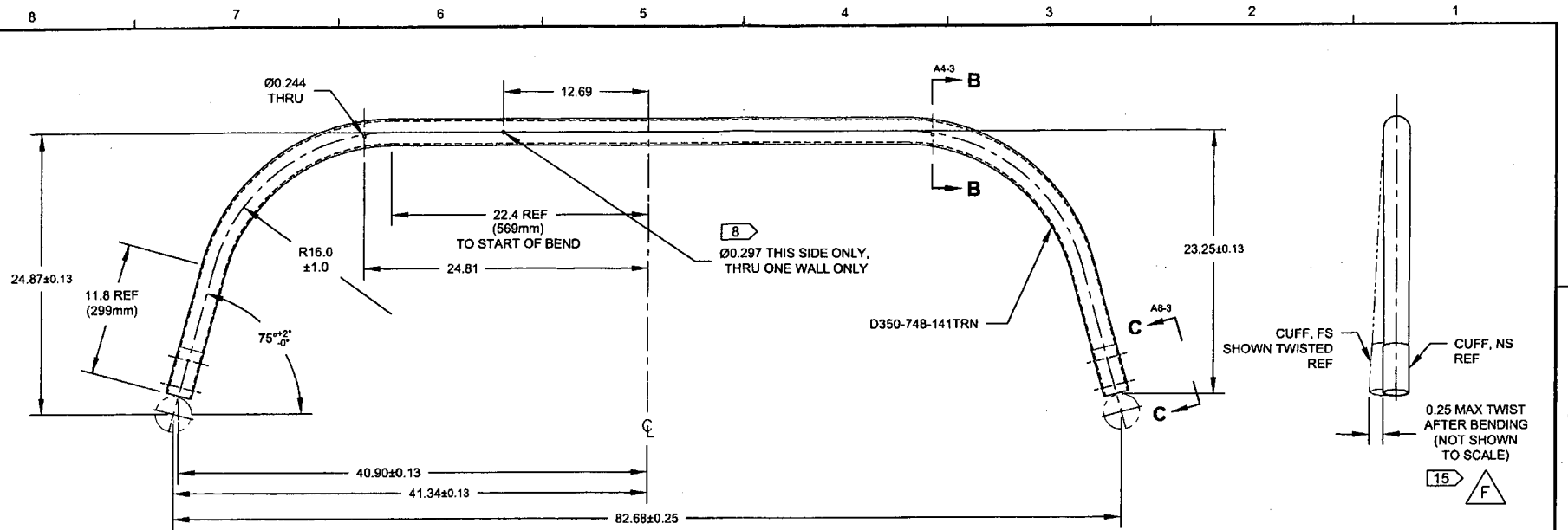
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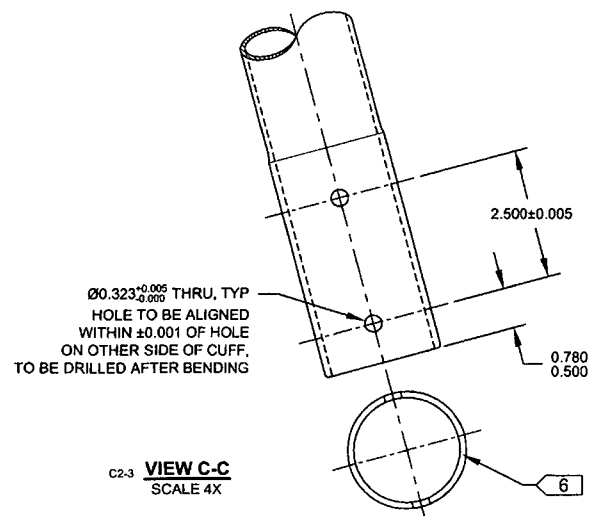
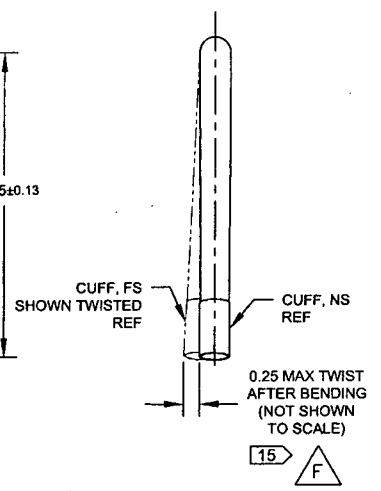
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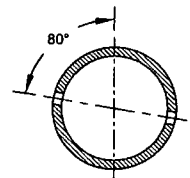
74664



**D350-748-141**  
**BENDING AND DRILLING DETAIL** 10



C2-3 **VIEW C-C**  
SCALE 4X



**SECTION B-B** D3-3  
SCALE 4X

UNDER REVIEW  
11.27.12

RELEASED  
2011-01-18

DESIGN	DP	<b>DART AEROSPACE LTD</b>	
DRAWN	DP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JB	DRAWING NO.	REV. F
MFG. APPR.	CB	D350-748-141	SHEET 3 OF 4
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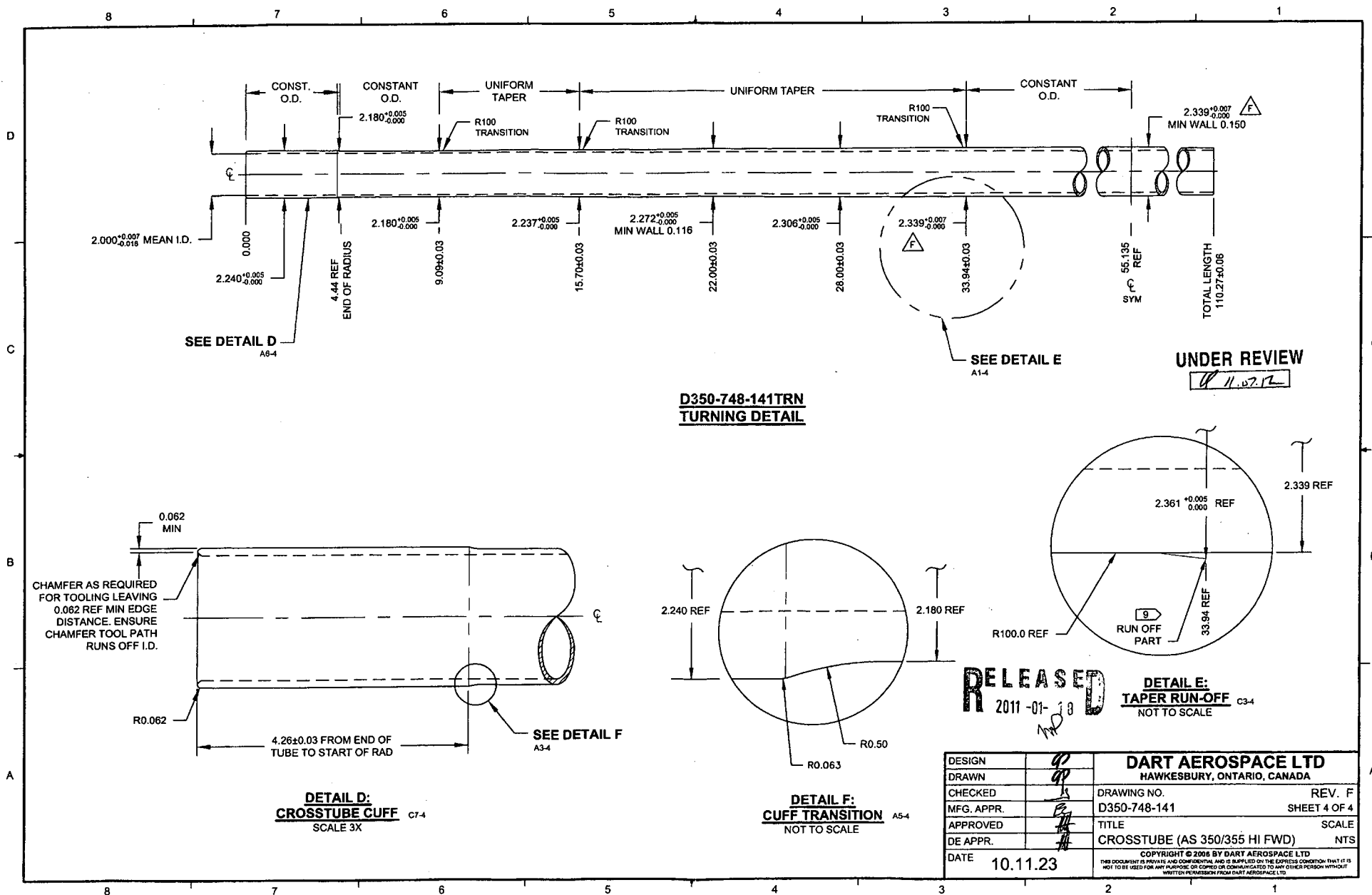
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